

REMARKS

This Reply is in response to a final Office action (Paper No. 9) mailed 23 February 2004. Claims 1-49 are pending in this application.

Claims 1, 18, 29-43 and 47-49 were rejected. The examiner stated that claims 2-17, 19-28, and 44-46 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1, 2, 10, 18, 19, 29, 35, 44 and 49 have been amended.

MPEP 714.13 states that "except where an amendment merely cancels claims, adopts examiner suggestions, removes issues for appeal, or in some other way requires only a cursory review by the examiner, compliance with the requirement of a showing under 37 CFR 1.116(c) is expected in all amendments after final rejection."

The amendments merely cancel claims, adopts examiner suggestions, removes issues for appeal, or in some other way requires only a cursory review by the examiner, Entry of the amendments is respectfully requested.

Particularly, claim 1 has been amended to incorporate the feature of claim 3. That is, claim 1 is in the independent form of claim 3 which has been canceled by this Amendment. Therefore, claim 1 is patentable, and its dependent claims 2-17 are also patentable.

I. Claim Rejections - 35 U.S.C. § 103 - Claims 1, 18, 29-43 and 47-49

Claims 1, 18, 29-43 and 47-49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable

over Hong '063 in view of Kunihiro.

The examiner asserted that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Kunihiro having two display panels which receive data bits opposite to each other, to be included in Hong's device so as motivated by Kunihiro, to be able to provide an LCD display which has no crossover wiring and applicable to chip-on-glass.

A. There is neither suggestion nor motivation to combine two references

1. The examiner did not properly show the motivation to combine two references.

The Hong patent is directed to an LCD projector (e.g., a projection-type television or video projector). As shown in FIGS. 4 and 5 of the Hong patent, two LCDs in the Hong patent are for a black-and-white signal and a color signal, respectively. "One color image can be expressed by superposing two images on the screen." (Col. 3, lines 50-51). On the other hand, the Kunihiro patent is related to character-type LCD units. (See the paragraph 2 of the English translation.). Two LCD sheets in the Kunihiro patent are not for superposing two images on the screen. Each LCD constitutes a half of the screen. The teaching and the principle of the Kunihiro show that two LCD separately shows each image.

In response to the applicant's reply of December 8, 2003, the examiner argued that Kunihiro is not bodily incorporated to Hong's device, but rather the teaching of Kunihiro having two display panels receiving data bits opposite to each other. At the same time, the examiner also argued that the artisan in the art would be motivated by Kunihiro, to be able to provide an LCD display which

has no crossover wiring and applicable to chip-on-glass.

The examiner's arguments are inconsistent because the examiner excludes the arrangement of the LCDs of Kunihiro, but finds the motivation from the arrangement of the Kunihiro LCDs. The alleged motivation may exist where it is necessary to arrange two LCDs like the Kunihiro patent. Since there is no reason to arrange two LCDs of the Hong patent in such a way, there is no motivation. Also, even where two LCDs are arranged like Kunihiro, there is no motivation because, in the Hong patent, one color image can be expressed by superposing two images, which are separately received from the beam splitter, on the screen. Nonetheless, the examiner excludes the arrangement of the Kunihiro patent, and finds the motivation from the arrangement of the Kunihiro patent. The examiner should provide why it is desirable to incorporate the teaching of the Kunihiro in the Hong invention, wherein two images separately received from the beam splitter are superposed on a screen. (The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

2. The proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose.

The intended purpose of the Hong patent is to improve brightness. The issue is whether the proposed modification render the Hong patent satisfactory for improving brightness.

In Kunihiro, "the bit data of the segment drive read from SRAM5a are mirror image bit data with which order was reversed." (Paragraph 16 of the English translation of Kunihiro) Also,

“the segment driver 5...drives each segment electrodes S80, S79,—,S41 to the opposite direction with the former one by one according to the read bit data.” (Paragraph 15 of the English translation of Kunihiro). If this teaching is incorporated in the Hong patent, the Hong patent is inoperable or at least unsatisfactory for improving brightness. For example, as shown in FIG. 7 of the present application, if the first LCD in the Hong invention modified by Kunihiro as proposed by the examiner shows the order of the bit “0111 1000” (i.e., “0111” and “1000”; the underlined “0” and “1” are most significant bit in each datum), the second LCD in the invention proposed by the examiner should have the order of the mirror image bit data of “0001 1110.” (i.e., “0001” and “1110”). That is, since “0111” in the first LCD and “0001” rather than “1110” in the second LCD are superposed, the Hong invention modified by Kunihiro is inoperable or at least unsatisfactory for improving brightness. This result is caused by the difference between the Kunihiro patent and the Hong patent (i.e., unlike the Kunihiro patent, the image of the Hong patent is expressed by superposing two images).

Also, the examiner regarded two reflection type LCDs (37, 38) of Hong ‘063 and two sheets (1, 2) of LCD of the Kunihiro patent as a first and second panels of the present invention. Hong ‘063 has two reflection type LCDs (37, 38) for a black-and-white signal and a color signal as shown in figure 2, and two LCDs (37, 38) are not longitudinally connected. In Kunihiro, two LCDs are arranged in a longitudinal direction (see paragraph 2 of Kunihiro) and are not composed of a black-and-white signal and a color signal. There is no reason to replace two reflection type LCDs (37, 38) with two panels of Kunihiro. Even if the replacement is made, the proposed replacement renders Hong ‘063 unsatisfactory for its intended purpose.

In response to the applicant's argument in the Reply of December 8, 2003, the examiner asserted that, first, "there is no limitation in the claims directed to the direction of the two LCDs whether horizontal or longitudinal directions," and "[t]herefore, the direction of the LCDs shouldn't b[e] an issue in rejecting the claims, and, "second, having the two LCDs (37 & 38) perpendicular to each other in Hong's device or in longitudinal direction in Kunihiro's device wouldn't preclude the examiner from combining the two references because such an arrangement if it is specified in Kunihiro's device; it is not specified in Hong's device," and, "[t]hird, Kunihiro is not bodily incorporated to Hong's device, but rather the teaching of Kunihiro having two display panels receiving data bits opposite to each other, is to be combined to Hong's device."

Regarding the first reasoning of the examiner's arguments, the examiner's reasoning is not proper. The examiner confused the first requirement of the prima facie case of obviousness with the third requirement of the prima facie case of obviousness. The first requirement is that there should be suggestion or motivation to combine two references, and the third requirement is that all the limitations should shown. The reason of that the proposed modification renders the reference unsatisfactory for its intended purpose does not have to be related to the limitation of the claim. That is, a 35 U.S.C. § 103 rejection does not allow the Examiner to pick and choose from the prior art only to the extent that it will support a holding of obviousness, while excluding parts of the prior art essential to the full appreciation of what the prior art suggests to one skilled in the art. *In re Wesslau*, 147 USPQ 391 (CCPA 1975). Nonetheless, the examiner asserted that the direction of the LCDs should not be an issue because there is no such limitation in the claims of the present application.

Regarding the second reasoning of the examiner's rejection, the examiner's reasoning is

ambiguous because it is hard to understand the portion of “because such an arrangement if it is specified in Kunihiro’s device; it is not specified in Hong’s device.” The issue is whether the proposed modification renders the Hong’s device satisfactory for its intended purpose, not whether the arrangement is expressly specified. The drawings and the specification of the Hong patent clearly shows that the arrangement of two LCDs in the Hong’s device is different from the Kunihiro’s device and is important for its intended purpose.

Regarding the third reasoning of the examiner’s arguments, the examiner’s reasoning is not proper. The examiner’s assertion is at most that two references can be combined.

MPEP 2143.01 states that

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device “may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.” 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

That is, the fact that two references can be combined does not render the combination obvious.

Also, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). The

examiner may not disregard the portions which would lead away from the combination.

Since the examiner picked and chose from the prior art only to the extent that it will support a holding of obviousness, while excluding parts of the prior art essential to the full appreciation of what the prior art suggests to one skilled in the art, the examiner's assertion is improper.

B. Hong '063 and/or Kunihiro taken separately or in combination do not teach or suggest all the claim limitations.

As to one of the requirements to establish a *prima facie* case of obviousness, for a rejection of claims under 35 U.S.C. § 103, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See the MPEP 706.02(j) and 2143 and 35 U.S.C. § 103. "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

The examiner asserted that Kunihiro teaches that one of the first or second panel receives the display data from the most significant bit and, the other panel receives the display data from the least significant bit.

The examiner's assertion is not proper for the following reasons.

The Kunihiro patent is related to character-type LCD units. (See the paragraph 2 of the English translation.). The segment is defined as one of the bars that make up a single character in a LCD display. The order of the bit data of the segment electrode disclosed in character-type LCD units of Kunihiro is not equivalent to the color data sequence of the present invention. In the Office action, the examiner merely argued that "the other panel [in Kunihiro,] receives the display data from the least significant bit." The applicant respectfully requests the examiner to provide where Kunihiro

discloses the limitation of “to display said received color data starting from most significant bit to least significant bit” and “display said received color data starting from most significant bit to least significant bit.” .

All the claim limitations are not taught or suggested by Hong and/or Kunihiro in combination or taken separately, the examiner failed to establish a prima facie case of obviousness.

Withdrawal of the rejection is respectfully requested.

Furthermore, with respect to claims 18 and 29-34, the first panel outputs (or reflects in claims 29-43) “outputting first incident light corresponding to said received color data applied by said control unit to data lines of each cell formed as a matrix in accordance with said panel control signals to display said received color data starting from most significant bit to least significant bit” (emphasis added), and the second panel outputs (or reflects in claims 29-43) “second incident light corresponding to said received color data applied by said control unit to data lines of each cell formed as a matrix in accordance with said panel control signals to display said received color data starting from least significant bit to most significant bit” (emphasis added). This feature is not shown by the examiner, and is different from the teaching of the mirror image bit data in the Kunihiro patent.

Therefore, claims 18 and 29-43 are patentable for the additional reason.

C. The inventions claimed in claims 1, 18, 29-43 and 47-49, as a whole, are not obvious over the prior art.

In determining the differences between the prior art and the claims, the question under 35

U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983).

“[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the ‘subject matter as a whole’ which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103.” *In re Sponnoble*, 405 F.2d 578, 585, 160 USPQ 237, 243 (CCPA 1969).

The present invention is directed to an apparatus and a method for correcting a false contour. The present invention recognizes a false contour problem and provides a solution for the false contour. On the other hand, Hong ‘063 combined with Kunihiro does neither recognize this problem nor provide a solution, and, rather, Hong ‘063 combined with Kunihiro teaches away from the claimed subject matter. This should be considered in determining the obviousness of an invention. The applicant also notes that “discovery of the cause of a problem . . . does not always result in a patentable invention. . . . [A] different situation exists where the solution is obvious from prior art which contains the same solution for a similar problem.” *In re Wiseman*, 596 F.2d 1019, 1022, 201 USPQ 658, 661 (CCPA 1979) (emphasis in original). However, the present case is different from *Wiseman*. Unlike *Wiseman*, neither Hong ‘063 nor Kunihiro does recognize a similar problem and the order of the data of the segment electrode is not the same as the order of the color signal. That is, Hong ‘063 combined with Kunihiro does provide neither the similar problem nor the same

solution. Accordingly, *Wiseman* cannot be applied to this case.

The examiner improperly asserted that the citation of the false contour correction is provided only in the preamble, and therefore, no significant weight should be given to such limitation and that, even if the two references do not specifically states correcting a false contour, the way in which the references are described clearly shows improvement in the display image, which in turn fairly reads on the claimed limitations.

It should be noted that "the claim as a whole" is not the issue of whether a certain language in the claim has a significant weight or not. Nonetheless, the examiner focuses only on each language of the claims, and does not consider the claim *as a whole*. According to *Bell Communications Research*., the preamble has the import that the claim as a whole suggests for it. ("[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995).) Furthermore, regardless of the preamble, the claimed subject matter is to correct false contour, and the examiner did not reject the claims under the enablement requirement. Therefore, it is not disputed that the claimed inventions correct false contour. As stated above, the combination of the two references does not recognize the problem, and does not solve the problem. In Kunihiro, the bit data of the segment drive read from SRAM5a are the mirror image bit data with which order was reversed. In the above example(, as shown in FIG. 7 of the present application,) if the first LCD in the Hong invention modified by Kunihiro as proposed by the examiner shows the order of the bit "0111 1000" (i.e., value of 15 16), the second LCD in the invention proposed by the examiner should have the order of the mirror image bit data of "0001 1110". The second LCD still has the data value

of "1111," like the first LCD. That is, the mirror image bit data of the segment drive cannot correct the false contour because the order of the segment electrode is reversed. The proposed modification does not enable the combination to correct a false contour because the order of the segment is also reversed.

Therefore, the inventions claimed in claims 1, 18, 29-43 and 47-49, as a whole, are not obvious over the prior art.

In view of the above, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. Reconsideration of the rejections and objections is requested. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

No fee is incurred by this amendment. Should the other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,



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